

Markman Brief Part Four

In particular, he conceded that neither the '847 patent nor the related '963 patent disclosed "the steps for solubilizing calcium in a juice beverage using a direct addition method." Exh. 19 at 297; *see also id.* at 299-300.

While the patent specification at column 11 proposes that "the acids and calcium carbonate can be directly added to a concentrated fruit juice . . .", Exh. 1 at col. 11, lns. 11-13, it is clear that the inventor regarded this approach as inoperable and that the premix addition of acids was required to achieve the goals stated in the patent. Indeed, as discussed above, Heckert disclosed that the direct addition of calcium, even with added acids, caused "residual carbonation" that "has been found to impart an unpleasant spoiled fermented note, especially in orange juice." *Id.* at col. 11, lns. 22-26. The creation of such an undesirable taste is inconsistent with the stated goal of using the an "acid component" comprising "a mixture of citric acid and malic acid" to solubilize calcium and provide **desirable** taste properties. *Id.* at col. 5, lns. 60-61 (emphasis added). Moreover, the prosecution history reinforces this conclusion, as discussed in detail below.

At best, the cited paragraph in column 11 only discloses the concept of a calcium-supplemented fruit juice beverage that P&G *hoped* would be the result of the direct addition of calcium with additional acids. *See Regents of the Univ. of California v. Eli Lilly and Co.*, 119 F.3d 1559, 1568 (Fed. Cir. 1997), *cert. denied*, 118 S. Ct. 1548 (1998) ("The description requirement of the patent statute requires a description of an invention, not an indication of a result that one might achieve if one made that invention.") It fails to disclose that Heckert was in possession of all the details of the composition of such a beverage as claimed, such as amount of calcium, the amount of the acid component, the citric to malic acid ratio, the percentage of fruit juice, the sugar content, or the amount of chloride ions. It also fails to provide any detailed

information concerning how the direct calcium supplementation of the fruit juice beverage is achieved.

B. The Statutory Enablement Requirement Precludes a Broad Claim Interpretation Because the Inventor Did Not Teach How to Make a Direct Calcium-Supplemented Fruit Juice Beverage

Another requirement for patent validity under 35 U.S.C. § 112, first paragraph, is that the patent specification must be enabling, *viz.*, it must contain a disclosure of how to make and use the claimed invention. As discussed above, Heckert admitted in his deposition that he knew of no other method to make a calcium-supplemented fruit juice beverage that did not involve the use of citric and malic acids in the premix solution used to initially solubilize the calcium. Exh. 19 at 67-70. Moreover, Heckert acknowledged “that the experiments that are described in the disclosure of this invention of direct addition of calcium into juice beverages failed to work.” *Id.* at 76; *see also id.* at 73. *See AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1243 (Fed. Cir. 2003) (holding that a disclosure teaching approach, which will not work and that discourages experimentation, is inadequate as a matter of law to enable such an approach). In order to make the direct addition of calcium work, he admitted that he needed “to go out and find a way to do it.” *Id.* at 293-94.

P&G’s vague statements in column 11 of the patent specification that other preparation methods can be used are thus insufficient as a matter of law to provide an enabling disclosure. For example, it discloses that “[c]are” has to be taken with the direct calcium method “to avoid the generation of cooked/brow[n]ed off-flavors due to the reaction and/or interactions of flavor components in the local basic environment surrounding the dissolved calcium carbonate or calcium hydroxide,” without any explanation of how one avoids such reactions and/or interactions of flavor components when calcium carbonate or calcium hydroxide is dissolved directly in the juice. Exh. 1 at col. 11, lns. 17-22. Nor is there any explanation of how one

avoids the effects of residual carbonation that are caused by direct calcium addition. *Id.* at col. 11, lns. 22-26. These are problems that affect the desired taste properties of the final beverage, problems that Coca-Cola, not P&G, solved and patented. Under the circumstances, the passage in column 11 of the '847 patent is nothing more than a naked invitation to experiment. As in *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1366 (Fed. Cir. 1997), P&G "is attempting to bootstrap a vague statement of a problem into an enabling disclosure sufficient to dominate someone else's solution of the problem. This it cannot do."¹⁵

Even assuming *arguendo* that P&G could rely upon the column 11 passage as both a valid written description of an embodiment of the claimed fruit juice beverage made without the use of the premix method and a legally enabling disclosure of how to make such a beverage, such reliance still would not entitle it to a broad construction of the claims. The cited passage still contemplates the direct addition of acids to the base juice acids to facilitate solubilization, as is required by Coca-Cola's construction of the claims. It does not, therefore, provide support for a broad interpretation of the claims that permits the direct addition of calcium to the natural acids found in the base juice alone to satisfy either the written description requirement or the enablement requirement under 35 U.S.C. § 112, ¶ 1.

The "claims may be no broader than the supporting disclosure, and therefore, . . . a narrow disclosure will limit claim breadth." *Gentry Galley, Inc. v. Berkline Corp.*, 134 F.3d 1473, 1480 (Fed. Cir. 1998). Under the circumstances, P&G's failure to satisfy the requirements

¹⁵ See also *Nat'l Recovery Techs., Inc. v. Magnet Separation Sys., Inc.*, 166 F.3d 1190, 1198 (Fed. Cir. 1999) (affirming summary judgment for lack of enablement when disclosure merely "recognizes a specific need in the . . . field" and only "provides a starting point from which one of skill in the art can perform further research in order to practice the claimed invention"); *Enzo Biochem, Inc. v. Calgene, Inc.*, 188 F.3d 1362, 1375 (Fed. Cir. 1999) (affirming finding that claims to an antisensing DNA technique were invalid for not being enabled where the specifications amount to "no more than a plan or invitation to practice" and failed to "provide guidance or specificity" as to how to execute that plan).

of 35 U.S.C. § 112, ¶ 1, necessarily warrants a claim construction limited to the preferred and sole working embodiment set forth in the ‘847 patent. *See, e.g., Wang Labs.*, 197 F.3d at 1383. That sole preferred embodiment is a beverage having an acid component comprising a mixture of citric and malic acids where the addition of citric acid and malic acid is via a premix solution used to initially solubilize the calcium and to provide desirable taste properties.

C. The Prosecution History Reveals that P&G Affirmatively Limited the Scope of Its Invention to the Premix Addition of Acids

1. The Examiner Interview Demonstrations Show that P&G’s Premix Addition of Acids Was the Only Viable Approach

In addition to the two demonstrations where calcium hydroxide was directly added to orange juice without added acids, a further demonstration illustrating a beverage made with the “direct addition of calcium carbonate to orange juice concentrate” with added citric and malic acids was said to be “representative of what would occur in a blend tank typically used in commercial citrus juice operations.” Exh. 7 at ¶ 8. This demonstration showed that the “direct addition” of calcium carbonate with added acids had the potential problems of (1) “undesirable carbonation and foaming of juice,” (2) “poor calcium solubility in juice/concentrate,” and (3) “strip desirable juice volatiles.” Exh. 6 at 2; *see also* Exh. 7 at ¶ 8. In particular, Mr. Dake noted that “[t]his foaming would make pumping and further processing of the concentrate difficult.” Exh. 7 at ¶ 8. Mr. Dake also reported that the examiner “noticed the salty note imparted” by the addition of calcium chloride to a sample of single-strength orange juice. Exh. 7 at ¶ 9; *see also* Exh. 8 at 6.

P&G’s interview outline contrasted the claimed invention to such beverages and asserted that its beverage made with “Premix Method” solved such “[p]roblems.” Exh. 6 at 1. As a result of this demonstration, the examiner found that the “[p]re-mix procedure appears to be preferred

or only workable procedure comparing [sic: compared to] direct addition.” Exh. 5 (emphasis added).

2. P&G’s Remarks Distinguished the Prior Art by Reliance on the “Critical” Premix Addition of Acids

The examiner cited the Sperti patent against both P&G’s method claims and the product claims. In rejecting the product claims, the examiner characterized Sperti as being “directed to a citrus drink which is formulated with added calcium chloride, sucrose and citrate and to show that malic acid is a buffer commonly used in orange juice.” Exh. 2 at 4 (emphasis added). P&G itself described Sperti in the ‘847 patent specification as teaching an “additive formula” of calcium chloride, citric acid, and sodium citrate that “can be added directly to the single-strength juice . . .” Exh. 1 at col. 3, lns. 7-13 (emphasis added).

Earlier during prosecution, P&G asserted that “[u]nlike the claimed premix method of the present invention, presolubilization of calcium and acids before addition to juice is not critical” to cited prior art approaches like Sperti because Sperti was “not directed at supplementing juices with high levels of solubilized calcium.” Exh. 8 at 5-6 (emphasis added). This is a clear admission by P&G that the claimed invention’s premix addition of acids was indeed “critical” to solubilizing the claimed high levels of calcium.

3. P&G Represented to the PTO that the Premix Addition of Acids Was the Only Way to Overcome the Problems in the Prior Art

After summarizing the experiments performed during the Examiner’s Interview — which compared the direct calcium-supplementation of fruit juice with and without added acids to P&G’s claimed products made with the premix addition of acids — P&G made the following statement:

To summarize, calcium supplementation of juice products is not as easy as adding calcium to juice. The calcium must be solubilized in

the juice. Also, potential problems such as deterioration of juice quality (e.g., color generation and gel formation), the addition or generation of unpleasant-tasting or smelling materials (e.g., odor), the removal of desirable juice volatiles, as well as other processing problems (e.g., foaming), must be avoided. *Direct addition of calcium sources does not solve these problems. The premix method of the present invention does.*

Exh. 8 at 5 (emphasis added). There could be no clearer disavowal of subject matter than P&G's express representation that juice products formed without a premix addition of acids did not achieve the claimed objective and therefore were outside the scope of its invention.

IX. "BEVERAGE" IN THE CLAIM PREAMBLE REQUIRES THAT THE CLAIMED INVENTION BE DRINKABLE

There also appears to be a dispute between the parties concerning the meaning of the term "beverage" in claim 1. The ordinary meaning of the term "beverage" is "a drinkable liquid." Exh. 21, MERRIAM-WEBSTER'S COLLEGiate DICTIONARY 117 (11th ed. 2003).

While "beverage" is not defined in the patent, the phrase "fruit juice beverage" is defined in the specification as a "fruit juice product which is in a single-strength, ready-to-serve, drinkable form." Exh. 1 at col. 4, lns. 44-46 (emphasis added). As can be seen, this definition is essentially consistent with the dictionary definition of "beverage." The prosecution history is in accord. *See, e.g.*, Exh. 8 at 2 ("drinkable juice beverages"). "Fruit juice concentrate" similarly is defined as a "fruit juice product which, when diluted with the appropriate amount of water, forms drinkable fruit juice beverages," and which are "typically formulated to provide drinkable beverages when diluted with 3 to 5 parts by weight water." Exh. 1 at col. 4, lns. 55-61 (emphasis added).

"Fruit juice product" is itself defined as "both fruit juice beverages and fruit juice concentrates which comprise at least about 45% fruit juice." *Id.* at col. 4, lns. 41-43. "Fruit juice" refers to certain enumerated types of citrus juices and noncitrus juices, and mixtures of

such juices. *Id.* at col. 5, lns. 1-9. Thus, it can be seen that the “fruit juice beverage” of independent claim 1 is a single-strength, ready-to-serve, drinkable beverage which contains at least about 45% fruit juice (citrus juice, noncitrus juice, or a mixture thereof) conjointly employed or combined with other ingredients.

The dispute between the parties appears to be over what terms in the claims are responsible for “desirable taste qualities.” As discussed above, the specification and the prosecution history teach that the invention is a fruit juice beverage free, *inter alia*, from excessive saltiness, brackishness, and undesirable odors. *See, e.g., id.* at col. 1, ln. 63, to col. 2, ln. 25; Exh. 6 at 1; Exh. 8 at 8. Those properties are not subjectively imparted to the claim through the word “beverage” in the preamble as P&G appears to contend, but are objectively apparent from the enumerated combination of claimed ingredients.

In particular, it is the “acid component” used to solubilize the calcium that the specification states is the “key component” from the standpoint of “providing desirable taste properties.” Exh. 1 at col. 5, lns. 56-59. It is the presence of an acid component in the fruit juice beverage that is a mixture of natural base juice acids and added citric and malic acid used to solubilize the calcium in the premix that avoids the generation of cooked/brown off-flavors, residual carbonation, foaming, precipitation of the calcium, and undesirable juice color and smell. *See, e.g., Exh. 6 at 1-2; Exh. 8 at 3-5.* Additional desirable taste properties are imparted by other claim limitations. *See, e.g., Exh. 1 at col. 13, lns. 25-27* (The limitations in claim 1 that specify a sugar content from about 2° to about 16° Brix (a measure of sweetness) and no more than about 0.07% by weight chloride ion (a limitation regarding saltiness)).

X. CONCLUSION

Coca-Cola respectfully requests this Court construe the terms "acid component comprising a mixture of citric acid and malic acid" and "fruit juice beverage" in the manner set forth above and in the accompanying Proposed Order.

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**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF OHIO**

Western Division (Dayton)

THE PROCTER & GAMBLE COMPANY,)
Plaintiff/Counterclaim-Defendant)
v.) CIVIL ACTION NO.: C-1-02-393
THE COCA-COLA COMPANY,) Chief Judge Walter Herbert Rice
Defendant/Counterclaim-Plaintiff.) Hon. Sharon Ovington (Magistrate)

PROPOSED ORDER

Upon consideration of U.S. Patent No. 4,722,847 and the pleadings filed by the parties, this Court finds that the following disputed claim terms are to be construed as follows:

“fruit juice beverage”

This phrase means a fruit juice product which is in a single-strength, ready-to-serve, drinkable form, and does not itself require any specific taste, odor, or appearance.

"acid component comprising a mixture of citric acid and malic acid in a weight ratio of citric acid: malic acid of from about 5:95 to about 90:10"

This phrase means the acids naturally present in the base juice and a mixture of citric acid and malic acid discretely added to the base juice in a weight ratio of citric acid: malic acid of from about 5:95 to about 90:10.

In light of the representations made by P&G in the '847 patent and during prosecution of the '847 patent in the U.S. Patent and Trademark Office, this Court finds further that said phrase should be further limited to require a premix addition of citric acid and malic acid utilized to solubilize the calcium.

FOR THE COURT:

Date: _____

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and accurate copy of THE COCA-COLA COMPANY'S BRIEF ON THE MEANING OF DISPUTED CLAIM TERMS IN P&G'S PATENT and PROPOSED ORDER were served on this 16th day of January, 2004, via facsimile to Plaintiff's counsel:

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